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(71) Applicant (for all designated States except US): CHIRON
SRL [IT/IT]; Via Fiorentina 1, I-53100 Siena (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PIZZA, Maria-
grazia [IT/IT]; Chiron SRL, Via Fiorentina, 1, I-53100
Siena (IT). SERRUTO, Davide [IT/IT]; Chiron SRL,
Via Fiorentina 1, I-53100 Siena (IT). RAPPUOLI, Rini
[IT/IT]; Chiron SRL, Via Fiorentina 1, I-53100 Siena (IT).

(74) Agents: MARSHALL, Cameron, John et al.; Carpmaels
& Ransford, 43 Bloomsbury Square, London WC1A 2RA
(GB).

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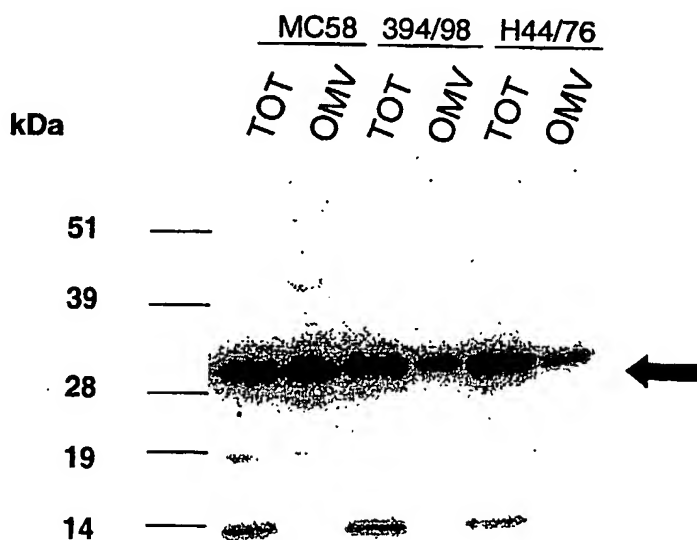
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(54) Title: IMPROVED BACTERIAL OUTER MEMBRANE VESICLES



(57) Abstract: Existing methods of meningococcal OMV preparation involve the use of detergent during disruption of the bacterial membrane. According to the invention, membrane disruption is performed substantially in the absence of detergent. The resulting OMVs which retain important bacterial immunogenic components, particularly (i) the protective NspA surface protein, (ii) protein NMB2132 and (iii) protein NMB 1870.A Typical process involves the following steps: (a) treating bacterial cells in the substantial absence of detergent; (b) centrifuging the composition from step (a) to separate the outer membrane vesicles from treated cells and cell debris, and collecting the supernatant; (c) performing a high speed centrifugation of the supernatant from step (b) and collecting the outer membrane vesicles

in a pellet; (d) re-dispersing the pellet from step (c) in a buffer; (e) performing a second high speed centrifugation in accordance with step (c), collecting the outer membrane vesicles in a pellet; (f) re-dispersing the pellet from step (e) in an aqueous medium.

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WO 2004/019977 A2